UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
SHEPARD, JUSTIN E

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 November 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-15</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-15</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/6/07

has been entered.

Response to Arguments

Applicant's arguments with respect to the claims have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

1.   Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Dinwiddie in view of Kraml in view of OpenCable Specification.

Claim 1, Dinwiddie discloses a method of upgrading operational software in a host device having a smart card interface, the host device including a read-only memory having original software for the host device (Fig. 1), comprising the steps of:

Providing a smart card including data representing upgraded software for the host device (Col. 3, lines 3-6);

Interfacing the smart card with the smart card interface of the host device (page 4, lines 19-24 Col. 3, lines 6-7),

Recognizing, in the host device, the smart card as including the upgraded software (page 4, lines 17-19 Col. 3, lines 4-6);

determining if the upgraded software is compatible with the host device by comparing attributes of the upgraded software to that of the host device, the host device performing the determination of compatibility before the upgraded software is transferred from the smart card (page 5, lines 22-30+ Col. 3, lines 50-58);

if the upgraded software is determined to be compatible, transferring the upgraded software from the smart card to a memory of the host device to perform the code upgrade (page 5, lines 2-5 and lines 25-28 Col. 3, lines 59-61); and

verifying the software transferred to the memory using data stored on the smart card (page 5, lines 25-30+ Col. 3, lines 61-63)

Dinwiddie does not clearly disclose, "if the transferred software can not be verified, restoring the original software from the read-only memory," and wherein by accessing a cable television card information structure (CIS) of the smart

card and locating a tuple in the cable television CIS which identifies the smart card as upgraded software.

Kraml discloses a process of updating software that if the transferred software cannot be verified, restoring the original software from the read-only memory (see Col. 7, lines 25-43). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dinwiddie in view of Kraml so to maintain reliability of the system to roll back to previous version while reducing any disruption in the provisioning of service and is inexpensive.(Col. 2, lines 5-37).

Dinwiddie and Kraml do not disclose a method wherein by accessing a cable television card information structure (CIS) of the smart card and locating a tuple in the cable television CIS which identifies the smart card as upgraded software.

In an analogous art, the CableCard spec teaches a method wherein by accessing a cable television card information structure (CIS) of the smart card and locating a tuple in the cable television CIS which identifies the smart card as upgraded software (page 18, section 5.2; page 19, section 5.3).

At the time of the invention it would have been obvious for one of ordinary skill in the art to use the CIS taught by the OpenCable Spec in the method disclosed by Dinwiddie and Kraml. The motivation would have been to use the documented PCMCIA standard to save on development costs and allow for the device to work with other devices built within the OpenCable specification.

Claim 3, Dinwiddie further discloses, wherein the smart card includes (National Renewable Security Standard) NRSS conditional access protocols and the step of recognizing the smart card as including the upgraded software includes accessing application information specified by the NRSS (page 5, lines 22-30+ Col. 3, lines 50-57).

2.   Claims 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dinwiddie in view of Kraml in view of OpenCable Spec and further in view of Metz et al. (US 5666293) and further in view of Kidder et al (US 2004/0031030).

Claim 4, Dinwiddie, Kraml and the OpenCable Spec do not clearly disclose, further wherein the host device is an open cable compliant set top box, coupled to a cable head end and includes an out of band channel for transferring data between the host compliant device and the cable head end and the method further includes the step of sending a message to the Cable head end via the out of band channel to indicate that the upgraded software has been transferred to the host compliant device.

In an analogous art, Metz teaches, wherein the host device (100 - figures 1 & 6) is an open cable compliant set top box, coupled to a cable head end (11 - figure 1) and includes an out of band channel for transferring data between the host compliant device and the cable head end (Col. 16, lines 38-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Dinwiddie, Kraml, and Kou in view of the teachings of Metz in order for an open cable compliant set-top box to be connected to a cable head

end for the benefit of sending and receiving control information from the cable head end.

The combination of Dinwiddie, Kraml, the OpenCable Spec and Metz fail to disclose sending a message to the cable head end via the out of band channel to indicate that the upgraded software has been transferred to the host compliant device.

In an analogous art, Kidder discloses when an upgrade is completed; the control shim notifies the slave SMSs, which sends a message to the master SMS or "head end" indicating that the upgrade of software is complete (¶ 0494).   Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Dinwiddie, Kraml, the OpenCable Spec and Metz with the teachings of transmitting a message to the headend indicating the installation of new software is completed, as taught by Kidder, in order to notify the headend of the latest version of software installed on the receiver.

Claim 5, is analyzed with respect to claim 1 and 4.

Claim 6, Metz further discloses the memory is a flash memory (Col. 21, lines 33-37)

Claim 7, the OpenCable Spec further discloses wherein the smartcard conform to PCMCIA (pages 18 and 19).

Claim 8 is further met by the analysis of claim 1.

3.   Claims 9-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Metz et al. (US 5666293) in view of Dinwiddie et al (US 7124210) and further in

view of Kraml et al. (US 6141683) in view of the OpenCable Spec.

Claim 9, Metz discloses an open cable compliance STB (see Fig. 6) comprising:

A point of deployment interface (see Fig. 6, el. 155);

A smartcard (PCMCIA card), coupled to the POD interface (see Fig. 6; Col. 22, lines

64-66);

A ROM having original program data for the STB (Col. 21, lines 50-53 and lines 65-

Col. 22, lines 5);

A processor 110 coupled to the POD interface 155 (see Fig. 6);

A memory 115/120 coupled to the processor, the memory including operational

software that controls the STB ; and

A bootstrap loader which is configured to control the processor to transfer program

data from the POD interface to the memory to overwrite the operational software with

upgraded software (Col. 22, lines 27-60);

Metz does not clearly disclose determining means which is determines whether the

upgraded software is compatible by comparing attributes of the upgraded software to

that of the host device and which verifies the program data transferred by the bootstrap

loader using data stored on the smartcard and if the transferred program data cannot be

verified, restoring the original program data from the read-only memory; and wherein

the smart card includes a tuple located in a card information structure CIS that identifies

the smart card as a POD card or a software update card.

Dinwiddie discloses determining means which is determines whether the upgraded

software is compatible by comparing attributes of the upgraded software to that of the

host device and which verifies the program data transferred by the bootstrap loader

using data stored on the smartcard (page 5, lines 22-30+ Col. 3, lines 50-63).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Metz with Dinwiddie so to take the advantage of the

smartcard features that complies with ISO standard 7816-2 and high-speed data ports

of an NRSS-type card such that software could be updated through the smartcard

interface (Col. 1, lines 54-57).

Metz in view of DinWinddie does not clearly disclose if the transferred program data

cannot be verified, restoring the original program data from the read-only memory; and

wherein the smart card includes a tuple located in a cable television card information

structure CIS that identifies the smart card as a POD card or a software update card.

Kraml discloses a process of updating software that if the transferred software

cannot be verified, restoring the original software from the read-only

memory (see Col. 7, lines 25-43). Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to modify Metz in view of

Dinwiddie and Kraml so to maintain reliability of the system to roll back to previous

version while reducing any disruption in the provisioning of service and is inexpensive

(Col. 2, lines 5-37).

Metz, DinWinddie and Kraml do not disclose a system wherein the smart card includes a tuple located in a cable television card information structure CIS that identifies the smart card as a POD card or a software update card.

In an analogous art, the OpenCable Spec teaches a system wherein the smart card includes a tuple located in a cable television card information structure CIS that identifies the smart card as a POD card or a software update card (pages 18 and 19).

At the time of the invention it would have been obvious for one of ordinary skill in the art to use the CIS taught by the OpenCable Spec in the method disclosed by Metz, Dinwiddie and Kraml. The motivation would have been to use the documented PCMCIA standard to save on development costs.

Claim 15 is rejected on the same grounds as claims 1 and 9.

Claim 10, the OpenCable Spec further discloses wherein the memory includes further software, configured to control the processor to read CIS data (pages 18 and 19);

Claim 11, the OpenCable Spec further discloses wherein the smartcard conforms to PCMCIA (pages 18 and 19).

Claim 12, Dinwiddie further discloses

The smart card further includes identification data which identifies a host

compliant device for which the upgraded software is intended (page 5, lines 22-30+);

and

the memory further Includes software that causes the processor to read the

Identification data from the smart card and to compare the identification data to

identification data for the set top box; whereby the processor determines if the software

update is appropriate for the set-top box (page 5, lines 25-28 Col. 3, lines 59-63);

Claim 13, Metz discloses a method of providing a software upgrade to an open

cable compliant host device (STB 100) coupled to a CATV headend (see Fig. 1), the

host device (STB 100) include a ROM having original for the host device (Col. 21, lines

50-53 and lines 65-Col. 22, lines 5) comprising:

providing a smart card Including the software upgrade for transfer to the host

device (Col. 22, 50-53; Col. 12, lines 52-60);

interfacing the smart card with a POD interface of the host device (Col. 22, lines

64-67+);

resetting the host device (Col. 22, lines 64-67+);

reading and processing a card information (bit pattern) of the smart card to

identify the smart card as providing the software upgrade;

Metz does not clearly disclose reading and processing a cable television card

information structure (CIS) of the smartcard to identify the smartcard as providing the

software upgrade; and determining if the software upgrade is compatible with the host

device by comparing attributes of the software upgrade to that of the host device, the

host device performing the determination of compatibility before the software upgrade is

read from the smartcard; if the software upgrade is determined to be compatible,

reading the software upgrade of the smartcard and writing the software upgrade to a

memory of the compliant host device; and verifying the software written to the memory

using data stored on the smartcard and if the written software cannot be verified,

restoring the original software from the ROM memory.

Dinwiddie discloses reading and processing a card information of the smartcard

to identify the smartcard as providing the software upgrade (page 4, lines 17-20); and

determining if the software upgrade is compatible with the host device by comparing

attributes of the software upgrade to that of the host device (page 4, lines 30-page 5,

line 2), the host device performing the determination of compatibility before the software

upgrade is read from the smartcard; if the software upgrade is determined to be

compatible, reading the software upgrade of the smartcard and writing the software

upgrade to a memory of the compliant host device and verifying the software written to

the memory using data stored in the smartcard (page 5, lines 20-30+). Therefore, it

would have been obvious to one of ordinary skill in the art at the time the invention was

made to modify Metz with Dinwiddie to update software utilizing a smartcard interface

so to avoid of having a technician to visit the consumer's location and perform the

upgrade of the software, as suggested by Dinwiddie (page 1, lines 12-15 and lines 23-

30).

Metz in view of Dinwiddie does no clearly disclose if the written software cannot be verified, restoring the original software from the ROM memory.

Kraml discloses a process of updating software that if the transferred software cannot be verified, restoring the original software from the read-only memory (see Col. 7, lines 25-43). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Metz in view of Dinwiddie with Kraml so to maintain reliability of the system to roll back to previous version while reducing any disruption in the provisioning of service and is inexpensive (Col. 2, lines 5-37).

Metz, DinWinddie and Kraml do not disclose a system wherein the smart card includes a tuple located in a cable television card information structure CIS that identifies the smart card as a POD card or a software update card.

In an analogous art, the OpenCable Spec teaches a system wherein the smart card includes a tuple located in a card information structure CIS that identifies the smart card as a POD card or a software update card (pages 18 and 19).

At the time of the invention it would have been obvious for one of ordinary skill in the art to use the CIS taught by the OpenCable Spec in the method disclosed by Metz, Dinwiddie and Kraml. The motivation would have been to use the documented PCMCIA standard to save on development costs.

4.   Claims 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Metz et al. (US 5666293) in view of Dinwiddie et al (US 7124210) and further in view of Kraml

et al. (US 6141683) in view of Kou and further in view of Kidder et al (US 2004/0031030).

Claim 14, the combination of Metz, Dinwiddie, Kraml, and the OpenCable Spec fail to disclose determining whether the software upgrade was successful and sending a message to the cable head end when the software upgrade is complete.

In an analogous art, Kidder discloses when an upgrade is completed; the control shim notifies the slave SMSs, which sends a message to the master SMS or "head end" indicating that the upgrade of software is complete (¶ 0494). Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Metz, Dinwiddie, Kraml, and the OpenCable Spec with the teachings of transmitting a message to the headend indicating the installation of new software is completed of Kidder in order to notify the headend of the latest version of software installed on the receiver.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin E. Shepard whose telephone number is (571) 272-5967. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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